

## II ECONOMIC TRANSFORMATION AND RURAL FINANCIAL MARKETS IN ASIA

**R**ural Asia has undergone a fundamental economic transformation during the past three decades. Economic growth rates have been particularly high in East and Southeast Asia, but even the slower growing countries have made progress. Growth has been accompanied by a rapid structural transformation of the rural economy, reflected in a decline in the relative importance of agriculture, increased use of sophisticated capital inputs in agricultural production, a greater specialization in production on large farms while small farms diversified their income sources, an explosion in the growth of rural cities and towns, and the emergence of a heterogeneous, rural nonfarm economy.

These changes created major new opportunities for rural financial markets and increased the demand for financial services. Here a brief summary of these changes is provided, drawing heavily on the empirical evidence presented in a companion volume (Rosegrant and Hazell, 1999), and the effect on financial markets of the changes is discussed. The role of finance in economic development is discussed in more detail in Chapter III and detailed accounts of how rural financial markets responded to these opportunities are presented in the six case studies.

### THE ECONOMIC TRANSFORMATION OF ASIA

Before the financial and economic crisis that began in 1997, many Asian economies recorded spectacular growth. The

rapidly growing economies of the PRC, Indonesia, Republic of Korea, Malaysia, and Thailand experienced annual GDP growth rates of 5 to 10 percent over the entire period of 1967 to 1995 (Rosegrant and Hazell, 1999). The South Asian countries of Bangladesh, India, Nepal, Pakistan, and Sri Lanka grew at rates in the 3 to 5 percent range. Myanmar and the Philippines were in the slow growth category of less than 3 percent per annum. With high growth rates, many Asian economies were able to generate substantial increases in per capita income.

Various explanations have been given for the rapid growth rates achieved by Asian countries, but there is little consensus among the analysts. Some analysts focus on the sound macroeconomic policies followed by East Asian economies, which had relatively small fiscal deficits, moderate inflation rates, realistic exchange rates, and stable real interest rates. Market-oriented policies and openness to international trade also characterize these countries, while a number of slower growing economies followed a more protectionist policy framework. Industrial policies in Japan, Republic of Korea, and Taipei, China, particularly concerning credit and exports, contributed to rapid and equitable growth, but questions have been raised about the transferability of this model to other economies. Investments in education and efficient bureaucracies have been identified as important in some economies, but the recent financial and economic crisis in Asia revealed large institutional weaknesses in corporate and financial governance.

## **STRUCTURAL TRANSFORMATION AND THE ROLE OF AGRICULTURE**

Economic development involves a fundamental structural transformation of the economy. The size of the nonagricultural sector rises relative to that of the agricultural sector, agricultural employment declines relative to nonagricultural employment, and expenditures on agricultural products fall relative to products and services produced by the industrial and service

sectors. These changes occur because of the low income elasticity of demand for food and other products produced in agriculture, and because of specialization, in which many economic functions carried out by farm households in the countryside are transferred to specialist producers in towns (Tomich, Kilby, and Johnston, 1995).

Asian agriculture has contributed to the structural transformation process in several ways (Rosegrant and Hazell, 1999). First, as agricultural incomes rose, demand increased for products and services produced in the nonfarm sector. Second, through savings and taxation, large amounts of capital were transferred from the agricultural sector to finance the nonagricultural sector. Third, agricultural growth contributed to the emergence of the agro-industry sector, rural manufacturing, and the rural nonfarm economy. Fourth, productivity increases permitted the release of agricultural labor to the emerging rural nonfarm economy and urban industries. Fifth, agricultural growth generated foreign exchange, through increased exports or reduced imports, needed for industrialization.

Agriculture had to undergo a productivity revolution to increase output and efficiency in order to perform these functions successfully. The countries most successful in stimulating agricultural growth were those that promoted technological change, improved rural infrastructure, and employed a set of policies that did not overly tax or discriminate against the agricultural sector. Economies with massive state intervention, weak infrastructure, or with more inward- than outward-looking policies were least successful in achieving an agricultural revolution to stimulate a broader economic transformation.

The decline in the relative size of agriculture has been especially rapid in some Asian countries. For example, the share of agriculture value added in total GDP in the Republic of Korea fell from 34 percent in 1966 to about 6.5 percent in 1995 (Rosegrant and Hazell, 1999). In the same period, the agriculture share fell dramatically from 51 to 17 percent in Indonesia, from 33 to 11 percent in Thailand, and from 28 to 13 percent in

Malaysia. In slower growing countries, the declines were from 45 to 28 percent in India, 37 to 26 percent in Pakistan, and 26 to 22 percent in the Philippines. In Myanmar, the agricultural share in GDP actually rose during the same period.

There has also been a significant decline in agricultural labor relative to the total labor force. The agricultural labor share in the Republic of Korea fell from 54 percent in 1966 to 14 percent in 1995, and from 58 to 23 percent in Malaysia in the same period. In 1995, the agricultural labor share in Indonesia, Pakistan, the Philippines, and Sri Lanka was relatively high at approximately 40 to 50 percent. It was 60 to 70 percent in Bangladesh, PRC, India, and Thailand, and over 70 percent in Myanmar and Nepal.

The fact that the agricultural labor share in the economy is higher than the agricultural output share implies lower per capita incomes in agriculture than in the nonagricultural sector. One way that many Asian farm households have narrowed this gap is to engage in multiple economic activities combining nonfarm activities with farm work. The emergence of a dynamic rural nonfarm economy has facilitated this process.

## **THE EMERGENCE OF RURAL NONFARM ACTIVITIES: ONE FOOT ON THE FARM AND ONE IN TOWN**

The specialization of economic functions that occurred as part of the structural transformation created an explosion in rural nonfarm activities. Specialized nonfarm firms have emerged to supply seeds, fertilizers, foods, household utensils, clothing, and other goods previously made on farms. Blacksmith and equipment repair shops produce and repair farm machines and implements. Transport and trade services increase in importance as marketable surpluses rise on farms. Moreover, some of these rural firms produce goods sold in urban and export markets.

This growth of the rural nonfarm sector has often been overlooked by policymakers but its importance is becoming

more widely recognized through the results of much new research (e.g. Dorosh, Haggblade, and Hazell, 1998; Hazell and Reardon, 1998; Reardon, et al., 1998). The nonfarm economy in Asia is now reported to account for 40 to 60 percent of total national employment and 20 to 50 percent of total rural employment (Rosegrant and Hazell, 1999). Income data from household surveys reveal that nonfarm activities are even more important than suggested by the employment data because the income estimates include some nonfarm work preformed by farm households. Some members of farm families engage in nonfarm enterprises on the farm (e.g. food processing, weaving, and basketry), while others find seasonal and part-time employment in towns. Furthermore, the nonfarm income share is rising, especially for poorer rural households. Many rural landless or near landless households rely on nonfarm earnings, including both low-investment manufacturing and service activities, and unskilled farm and nonfarm wage labor. Often nonfarm work generates earnings during off-peak farm seasons so it contributes to income stabilization and consumption smoothing over the year.

Farm households also export labor to urban centers for full-time and seasonal employment. Some of these persons become overseas workers and send large amounts of remittances to households on farms and in small towns to help sustain household consumption and contribute to onfarm investments. These income flows and remittances are especially important in rural areas that lack insurance and financial markets.

## THE COMMERCIALIZATION OF AGRICULTURE

The green-revolution technologies, involving the introduction in the late 1960s of high-yielding varieties of wheat and rice, application of chemical fertilizers and modern pest control methods, coupled with increased capital investments on farms and in institutional infrastructure, fueled the structural transformation of rural areas. The new

technologies expanded agricultural production and induced demand for fertilizers, chemicals, and other purchased inputs. The commercialization of production had two impacts. First, the rise in marketable surpluses led to increased marketing of agricultural inputs and outputs. Cash incomes rose for many farm households, market exchanges substituted for barter, and the rise in use of money as the medium of exchange helped integrate the rural with the urban economy. Second, decisions about product choice and input use evolved from a subsistence to a profit maximization orientation (Pingali and Rosegrant, 1995). On some farms, integrated farming systems were replaced with more specialized crop and livestock enterprises. Highly specialized large-scale plantation systems have been developed for fruit, sugar, tea, and rubber. Smaller farms combine farm and nonfarm enterprises to increase incomes and diversify their income sources.

Structural transformation has also been accompanied by an evolution in food production systems (Table II.1). At low levels of economic development, most farms produce for subsistence, with the exception of export crops produced on plantations. Food self-sufficiency is the farmer's primary objective, most inputs (labor, seeds, manure) are nontradable, and a wide range of diversified products is produced. Income is derived largely from agricultural sources but, because production is low and mostly consumed, little cash income is generated.

With new biological technologies, production rises and marketable surpluses begin to emerge, particularly in regions with better infrastructure. Semi-commercial farms regularly produce surpluses and use a mix of tradable and nontradable inputs. Some specialization in production occurs at this stage, and farm households begin to earn larger amounts of nonagricultural incomes from onfarm sources (e.g. wage labor for other more specialized farms) and nonfarm sources. Semi-commercial farms engage in many cash transactions. The last group of farms is fully commercialized; they operate almost exclusively in the market economy, and employ the full range of financial instruments to facilitate transactions of goods and services.

**Table II.1: Characteristics of Food Production Systems with Increasing Commercialization**

Level of market orientation	Farmer's objective	Sources of inputs	Product mix	Household income sources
Subsistence systems	Food self-sufficiency	Household-generated (nontraded) inputs	Wide range	Predominantly agricultural
Semi-commercial systems	Surplus generation	Mix of traded and nontraded inputs	Moderately specialized	Agricultural and nonagricultural
Commercial systems	Profit maximization	Predominantly traded inputs	Highly specialized	Predominantly nonagricultural

Source: Pingali and Rosegrant (1995).

## MARKETS AND THE CRITICAL ROLE OF FINANCE

### The Emergence of Markets

The structural transformation process requires supportive institutions. Markets are required in order to enable a greater division of labor, by which a producer specializes in one activity and trades with others who have different specializations. Markets integrate these specialized producers and consumers, allowing them to engage in transactions involving an increasingly heterogeneous set of goods and services produced across space and time. As structural transformation begins to occur, markets for land, labor, capital, and finance emerge, multiply in number, and become more complex in response to the greater variety of goods and services demanded. Markets with varying degrees of efficiency have emerged in the developing market economies of Asia. The transition economies in the region, however, are experiencing difficulties in creating markets and supportive institutions such that agriculture is constrained in its ability to contribute to economic growth. Therefore, the transformation process is retarded. In the extreme, there are producers in the transition economies who have

actually reverted to subsistence production and barter exchanges.

## **The Role of Finance**

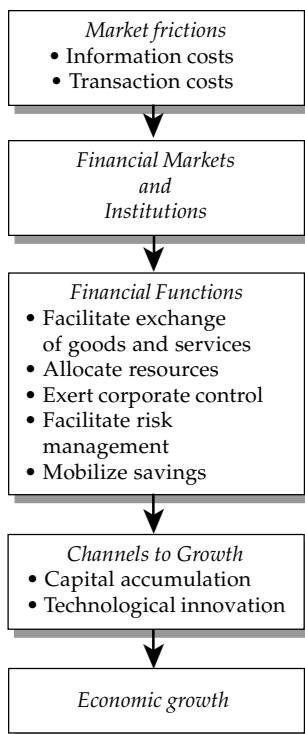
The theoretical literature on finance describes why financial contracts, markets, and institutions emerge in a market economy and contribute to economic growth. Levine (1997) summarized this comprehensive literature. The costs of acquiring information<sup>1</sup> and making transactions create incentives for the emergence of financial markets and institutions. The financial system has the primary role of facilitating the allocation of resources across space and time in an uncertain environment. This primary role consists of five basic functions: ameliorating risk, allocating resources, monitoring managers and exerting corporate control, mobilizing savings, and facilitating the exchange of goods and services. When these functions are performed well, they contribute to economic growth through two channels: capital accumulation and technological innovation (Figure II.1). The emergence of financial systems, and especially banking can, therefore, be expected to influence the speed and pattern of capital accumulation and technological innovation in rural areas. The empirical question concerns whether or not financial markets have contributed to or retarded economic growth in rural Asia.

## **Policymaker Perceptions about Rural Finance**

Policymakers have long perceived the potentially important role for credit in agriculture. The authors of the Asian Development Bank (ADB) study on rural Asia in 1977 (ADB, 1978, p. 91) noted that the development of credit programs up

---

<sup>1</sup> The crucial role of information in contributing to efficient financial markets is discussed in Chapter III.



Source: Adapted from Levine (1997).

**Figure II.1: A Theoretical View of Finance and Growth**

to that time reflected, first, the concern for accelerating agricultural (especially food) production; second, the growth potential of agriculture by widespread adoption of high-yielding varieties and, third, recognition of the role of credit in the development of small farm agriculture

Many Asian policymakers at that time did not believe that a farmer's ability to self-finance investments would lead to a socially optimum rate of growth. They perceived that the potential of the green revolution would not be realized unless farmers could access an elastic supply of funds at more reasonable interest rates than available from informal sources. These views provided the rationale used by many Asian countries to develop targeted and subsidized agricultural credit

programs along with strong support for input- and output-marketing projects to encourage the adoption of green-revolution technologies. The Bimas project in Indonesia and Masagana 99 in the Philippines are archetypal models of this strategy. They provided highly subsidized loans to farmers who agreed to adopt the new technologies; later, both projects collapsed under the weight of unpaid loans.

The precise impact of credit projects is difficult to measure and the results of impact studies are ambiguous, as will be discussed in the next chapter and in the case studies. While it is fairly clear that credit did not make as important a contribution to technological change as was expected, the policies employed to push banking into rural areas and the large amount of subsidized funds disbursed undoubtedly had diverse and diffuse results. In some cases, loans supposedly borrowed to finance the purchase of fertilizer and other production inputs may have made an even greater impact because the borrower diverted the money in an emergency to buy medicine for a sick child. In other cases, the loans may have helped families maintain household consumption levels during the lean season before harvest. In still other cases, funds borrowed for farming leaked into financing nonfarm enterprises. The point is not that the credit had no impact, but rather that the Asian financial systems could have played an even more important role if the financial policies had focused less on subsidized loans for specific purposes. Moreover, the economic transformation might have evolved in a more equitable fashion. The existence of subsidized credit institutions discouraged the emergence of market-based institutions in rural areas and contributed to the disparity between households and firms that gained access to formal finance and those that were denied access.

The following chapters will explain how the well-intentioned credit projects did not produce the desired results. The projects had less impact on adoption of the new technologies than expected, especially for farmers who were convinced about the expected profitability of adoption and used self-finance or informal loans to finance technological change. However, the projects seriously impaired the banks, cooperatives, and

specialized agricultural development banks that tried to implement them. Moreover, the strategy employed was usually fundamentally flawed because it failed to provide savings, insurance, money transfer, and other financial services demanded by farmers.<sup>2</sup> Policymakers did not fully understand the concept of a financial market and the multiple ways it contributes to economic growth, and pursued a strategy excessively oriented towards providing cheap loans to farmers.<sup>3</sup>

## Finance and Welfare Outcomes

The way financial markets perform can be an important determinant of the welfare outcome of increased commercialization in agriculture (von Braun, 1995). First, contrary to their intent, credit policies have often been biased against the poor. For example, subsidized interest rates, supposedly designed to help the poor, actually benefit the rich who successfully compete to obtain the scarce funds (Gonzalez-Vega, 1984). If access to credit really accelerates adoption of technology, then the late adopters who face credit constraints may face lower profits and miss most of the benefits of the new technology.

Second, smallholders who adopt the new commercial orientation often maintain some low-return subsistence food production as insurance in a risky environment. The poor are most likely to adopt this strategy. The development of sustainable financial institutions may encourage these producers to abandon this strategy, if they are assured of borrowing for consumption expenditures in the event of crop

---

<sup>2</sup> A comprehensive review of the literature on donor and government experience with programs and policies to expand agricultural credit and marketing services in low-income countries can be found in Meyer and Larson (1997).

<sup>3</sup> However, Adams (1988a) noted that several Asian countries employed more of a financial intermediation approach to finance and mobilized more rural savings than many other low-income countries.

failure. Moreover, farmers may choose to hold their borrowing capacity with a reliable financial institution in reserve and allocate their own resources to more risky and more profitable enterprises, knowing that credit will be available if needed (Zeller et al., 1997).

Third, the rural financial system can improve the ability of households to save and build up productive assets. This is particularly true where agricultural commercialization leads to the receipt of large payments of cash a few times during a year. Through efficient savings and borrowing opportunities, households can smooth their cash flows (Meyer and Alicibusan, 1984); resources that are surplus for one household at one point in time in one location can be intermediated to another household in another location that faces a deficit in desired funds. The problem is that most government credit projects ignored the savings side of financial intermediation and did not facilitate the accumulation of rural savings.

Rural financial markets can also be important in shaping the emergence and evolution of nonfarm enterprises (Meyer, 1999). However, most of the targeted agricultural credit programs were restricted to farm producers and some even prevented financial institutions from serving nonfarm enterprises. This meant that liquidity-constrained enterprises were limited to their own resources, to informal finance, or to borrowed funds diverted from other purposes. In these situations, firms that supply farm inputs or processing services and market farm outputs may be constrained in offering efficient service. Suppliers' credit and advance payments provided by larger urban firms may reduce the severity of this problem, but these arrangements that tie credit to marketing may also limit competition, resulting in higher costs and lower prices for farmers.

## **RURAL FINANCIAL MARKET POLICIES IN ASIA**

The conclusion of this analysis is that economic growth in rural Asia during the past two or three decades has often

occurred in spite of, rather than because of, rural financial policies. In fact, financial policies may have distorted economic outcomes and contributed to some of the inter- and intra-regional inequalities in income and wealth observed between and within countries in the region.

We analyze in the following chapters how views concerning rural finance have evolved, especially during the 1980s and 1990s. Financial policies have improved in some countries, especially Indonesia and Thailand, since the ADB's 1977 survey (ADB, 1978). Unfortunately, many countries, especially in South Asia and in the transition economies, are still a long way from having strong and viable market-based financial institutions. Many countries still cling to the old paradigm of directed and subsidized farm credit.

The following chapters will demonstrate how appropriate financial market policies contribute to structural transformation and agricultural growth. They will also show how growth in rural areas stimulates the demand for financial services. The role of the State is also analyzed. On the one hand, the appropriate role for government is to create a conducive environment in which competitive financial institutions can emerge, build financial infrastructure, and support institutional development. Among other things, this means macroeconomic stability, reasonably low levels of inflation, procedures to enforce contracts, the protection of property rights, and a regulatory and supervisory system to ensure prudent financial operations. On the other hand, governments must avoid the temptation of inappropriately using financial institutions for social policies such as subsidizing particular economic activities or groups within society or alleviating social problems following major conflicts or disasters. Financial market interventions are a poor second-best approach for solving important social problems that require direct policies to encourage human capital formation and improve access to productive assets. A new paradigm of financial market development has emerged to substitute for the largely failed directed credit approach to rural finance. It involves a three-pronged framework for building financial markets as discussed in the next chapter.

